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NUCLEAR WASTE MANAGEMENT PROGRAM

GLOSSARY
Revision 5

Effective Date: 10/28/02

Glossary
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                (printed name)   (signature)   date

1.0   Definitions

The definitions listed here are a compilation of the definitions used in the Nuclear Waste Management Program (NWMP) Procedures (NPs) and Activity/Project Specific Procedures (SPs). Included in parenthesis following each definition is the NP(s) and/or SP(s) where that particular definition is used.

Access Control - The methods established to permit authorized and prevent unauthorized access to software. Controls may consist of restricting access to the computer during off-hours or providing password security for the computer or the software. These controls may be provided on either a software-specific or a system-specific basis. (NP 19-1)

Access Control Memorandum – Memorandum which documents access control methods for one or more codes. (NP 19-1)

Activity/Project Specific Procedure (SP) - A SP is a NWMP implementing procedure which specifies requirements for the performance of a specific activity, or for implementation of project specific QA requirements. An example of a SP for the performance of a specific activity would be a SP which directs how a specific piece of data collection equipment is to be set-up or operated. A SP for project specific QA implementation is exemplified by SP 13-1, which prescribes WIPP project specific sample control practices. (NP 5-1)

Adequacy –The adequacy of a Quality Assurance (QA) program being assessed is determined by evaluating (during an audit or surveillance) the auditees' compliance with upper-tiered requirements. (NP 18-1)

Administrative Change – With regard to procurement documents, a change made to a contract or a purchase requisition (PR) that does not affect the scope of work or the QA requirements specified in either of these documents. Administrative changes consist of changes to only the following aspects of procurement documents:

- period of performance,
- ceiling price,
- funds availability,
- estimated cost reporting,
- allowable travel costs,
- allowable charges,
- delegation of authority (identification of SDR),
- Sandia points-of-contact,
- billing/invoicing instructions,
- information on Sandia work week, work hours, and holidays,
- safety, health, environment, property, and fire protection,
- government-furnished property/material,
- copyrights for Sandia directed technical performance,
- requirements concerning university employees,
- Contractor requests for Sandia restricted area access,
- wage determination,
- rate revisions,
- termination article--multi-year contracts. (NP 4-1)

Administrative Staff – Personnel assigned responsibility for administrative support tasks. (NP 2-1)

Alternate Calculation - An independent verification of a design or design analysis that uses alternative methods or calculations from those utilized in the original design work. (NP 3-1)

Analysis - The rational investigation of a natural or artificial phenomenon to discover principles that underlie the phenomenon. More formally, analysis is the process of defining, investigating, validating, reviewing, and documenting the study of a system or component of a system. (NP 9-1, 9-2)

Analysis Plan (AP) – A document that defines the technical scope, approach, methodology, and requirements for conduct of a calculational or computational investigation. (NP 1-1, 9-1)

Analyst - Generally, personnel performing tasks defined in an Analysis Plan. (NP 9-1)

Archive Sample – Material that is derived from difficult-to-repeat sample collection activities (i.e., principal bore holes) that may have undergone analysis or testing and potentially will require future analysis or testing. (NP 13-1, SP 13-1)

Assessment Task Leader - The SNL NWMP team individual who is responsible for the evaluation of work activities to determine audit and surveillance needs, establishing assessment schedules, and the coordination of available auditor and Lead Auditor resources. (NP 18-1)

Audit - A planned and documented independent assessment to determine by investigation, examination, or evaluation of objective evidence, the adequacy, and compliance with established procedures, codes, standards, instructions, drawings, and other applicable requirements; and the effectiveness of implementation. An audit should not be confused with surveillance or inspection activities performed for the sole purpose of process control or product acceptance. (NP 4-1, 18-1)

Auditor - An individual who is qualified to perform assigned portions of an audit. (NP 18-1)

Audit Team - An audit team consists of an audit team leader and may include additional auditors and technical specialists. (NP 18-1)

Audit Team Leader (ATL) - An audit team leader is a certified lead auditor who has been assigned to lead an audit team. (NP 18-1)

Authentication - The act of attesting that the information contained within a document or record package is accurate, complete, legible, and appropriate to the work accomplished. (NP 17-1)

Author - The individual responsible for preparing and revising NPs, SPs, and other controlled documents, coordinating reviews, and resolving comments on those documents. If the Author is no longer a project participant, the SNL QA Department Manager will designate a replacement to act as the Author. (NP 5-1)

Authorized Derivative Classifier (ADC) – A person authorized to determine that a document or material is unclassified or classified as Restricted Data, Formerly Restricted Data, and/or National Security Information and at what level based on classification guidance or source documents. (SP 6-1)

Baseline – Software and associated documentation that has been placed under configuration control and approved for use. (NP 19-1)

Budget/Procurement Specialist (BPS) - SNL NWMP personnel responsible for the administrative processing of procurement documents. (NP 4-1)

Buyer - See the definition for Sandia Contracting Representative (SCR). (NP 4-1)

Calibration Provider - The person or organization responsible that performs calibration of M&TE. (NP 12-1)

Causal Codes – A code letter from Appendix D of NP 16-1 used to identify the cause of a deficiency by origin and root cause representing elements of NQA-1. (NP 16-1)

Carlsbad Field Office (CBFO) – The DOE field office responsible for oversight of the WIPP project. (SP 6-1, 6-2)

Certify - To confirm formally in writing as true, accurate, or genuine. (NP 2-1)

Chain-of-Custody (CoC).- Chain-of-custody involves documenting the possession of samples from the time they are collected or created until sample disposition. (NP 13-1, SP 13-1)

Cited Reference – Any document referenced in final reports. (NP 17-1, SP 6-1)

Code - A computer software item ("code" is used interchangeably with "software"). (NP 19-1)

Code Team/Sponsor – The Lead Code Sponsor, Code Subject Matter Expert, and the Code Developer make up the team, which can expand or shrink as necessary depending on the complexity of the development effort. Individual(s) who oversees the Software Quality Assurance (SQA) process for a particular software item. (NP 19-1)

Complementary Cumulative Distribution Function (CCDF) – One minus the cumulative distribution function. (NP 9-2)

Complete – With regard to records, the point at which no additional information is added to a record or record package. Authentication by signature (or potentially by electronic means) or clear issuance

by an organization (e.g., SAND Report cover) is the final act to signify the condition of completeness. Complete also refers to "appropriate to the work accomplished." (NP 17-1)

Compliance Decision (CD) – Compliance, certification, or recertification analyses whose output is relied upon to make design, analytical, operational, or compliance-based decisions with respect to the performance of the waste confinement system. These CD results will be used in supporting an application for certification or recertification of a permit or license (e.g., performance assessment, data analysis, parameter development). (NP 9-1, 9-2, 19-1)

Compliance Decision Software – Software that is used to demonstrate compliance with disposal regulations or whose output is relied upon to make design, analytical, operational, or compliance-based decisions with respect to the performance of the waste confinement processes. (NP 19-1)

Compliance/Recertification Analyses – Analyses which generate results that will be used in supporting an application for or recertification of a permit or license (e.g., performance assessment, parameter development). (NP 9-1)

Condition Adverse to Quality (CAQ) - An all-inclusive term used in reference to any of the following: deviations, malfunctions, deficiencies, and technical inadequacies. Adverse conditions include those identified during the performance of specified work affecting quality as well as during verification, surveillance, audit, trending, and management assessment activities. (NP 16-1, 18-1)

Contract - A document issued by the Sandia Contract Representative (SCR) that:
- includes the requirements of a Purchase Requisition (PR) and
- specifies the terms and conditions governing and controlling the performance of the Statement of Work (SOW). (NP 4-1)

Controlled Document (CD) - A document that contains or specifies technical or quality requirements, prescribes the conduct of processes, or establishes the design of systems important to waste isolation, nuclear safety, or demonstration of regulatory compliance. Examples include, but are not limited to, NWMP Procedures (NPs), Test Plans (TPs), Analysis Plans (APs), Activity/Project Specific Procedures (SPs), Design Plans, NWMP QA Requirements Matrix, NWMP Glossary, and drawings. (NP 5-1, 6-1, 6-2)

Controlled Documents Database - The NWMP database used for the tracking of distribution and status of paper copies of controlled documents and for production of a Controlled Document master list. Contains and generates information to include:
- the names and organizations of recipients of paper copy controlled documents;
- the control number of the copy assigned to each document holder;
- the date of copy distribution and receipt; and
- the current status of the document (active or inactive). (NP 6-2)

Corrective Action - Measures taken to remediate, investigate and preclude the repetition of conditions adverse to quality. (NP 16-1, 18-1)

Corrective Action Request (CAR) - The SNL NWMP Forms NP 16-1-1, NP 16-1-2, and NP 16-1-3 used to document and track conditions adverse to quality. (NP 16-1)

Corrective Action Tracking System - A database used to document the status of all CARs initiated by SNL. This system will be maintained through the end of the project. (NP 16-1)

Cumulative Distribution Function – The sum (or integral as appropriate) of the probability of those values of a random variable that are less than or equal to a specified value. (NP 9-2)

Data Acquisition System (DAS) Software – Software used to control test equipment, obtain electrical readings from the equipment, convert the readings to scientific or engineering units. (NP 19-1)

Database Administrator (DBA) – The individual responsible for maintaining the parameter database, including its security and maintenance of the data entered into it. The DBA is responsible for the creation, retrieval, and update rules for the database that make it possible to enter the values correctly. (NP 9-2)

Delta Distribution - The delta distribution is used to assign probabilities to the elements of some finite set of objects. (Tierney, 1996 ERMS 35268) (NP 9-2)

Design Document (DD) – A software document that describes the major components of the software design: the theoretical basis, embodied mathematical model, control flow, control logic, data structure(s), and the allowed or prescribed ranges for data inputs and outputs in a manner that can be implemented into software. (NP 19-1)

Design Input – Those criteria, such as design bases, conceptual design reports, performance requirements, regulatory requirements, codes, and standards, or other requirements upon which the detailed final design is based. (NP 3-1)

Design Review - A documented evaluation of design output during the design process to determine the design adequacy and the conformance to specified acceptance criteria (e.g., the design performance criteria). (NP 3-1)

Design Plan – A controlled document that describes a unique design process from the selection of design inputs through to the outputs, design verification, and final release. (NP 3-1)

Developed Software - Software developed or modified by SNL. (NP 19-1)

Deviation - A departure from SNL WIPP QA program requirements (i.e., a "shall" activity specified in a procedure). (NP 16-1)

Document Control Staff – SNL NWMP personnel responsible for the issuance, distribution, and recall of Controlled Documents. (NP 6-2)

Dual Storage – Records stored at facilities at locations sufficiently remote from each other to eliminate the chance of exposure to a simultaneous hazard. (NP 17-1)

Editorial Changes – The following items are considered editorial or minor changes:
- correcting grammar or spelling
- renumbering sections or attachments
- updating organizational titles (no change in responsibility)
- changing nonquality affecting schedules
- revising or reformatting forms, providing the original intent of the form has not been altered
- changing attachments marked "Example", "Sample", or exhibits that are clearly intended to be representative only
- incorporating clarification changes that don't affect the purpose of the document

(NP 6-1, 6-2, 9-1, SP 6-1)

Effective Date - The date on the controlled document indicating when implementation begins. (NP 5-1, 6-2)

E-Mail Record - Any information transmitted or received by the electronic mail system that meets the definition of a QA record. All header/address information must be submitted also. (NP 17-1)

Entry Checker – The individual responsible for verifying the data entry of the parameter values into the database. (NP 9-2)

Finding - A condition that is not in compliance with established policies, procedures, instructions, drawings, or other required documents and compels documented corrective action by the organization subject to the assessment. (NP 18-1)

Grading of QA – The process by which the extent of management and QA controls applied to an activity is commensurate with the importance of that activity to program objectives, safety, or other relevant factors. (NP 1-1)

Implementation Document - A document which contains the source listing and documentation of the process used to convert the source code to an executable. (NP 19-1)

Independent Technical Reviewer – In order for an individual to qualify as an independent technical reviewer, the individual must not have performed, contributed to, or directed the work being reviewed, and must not stand to either gain or be adversely affected by the results of the work or the success of the reviewed document. (NP 6-1, 20-2)

Initiator - The individual who originates the CAR, Form NP 16-1-1, identifying an adverse condition. This may be any individual performing activities in support of the SNL NWMP scope of work for the NWMP (e.g., SNL personnel, Lead Auditor, SNL QA personnel, suppliers). (NP 16-1)

Installation and Checkout - The phase of software development where the validated executable code is installed on the production computer and regression testing is conducted to ensure the software performs in the same manner as documented in the Validation Document. (NP 19-1)

Interface – With regard to organization activities, the boundaries of responsibilities for each organization when organizations interact. With regard to design, the common boundaries between physical systems or assemblies that are assigned to different parts of the design organization. (NP 3-1, 5-1)

Job Description - The characterization of a job by position and area (see Form NP 2-1-1) for which personnel must qualify based on education and previous experience. (NP 2-1)

Just-in-Time (JIT) Procurements - SNL's procurement system for commercial items (products). (NP 4-1)

Lead Auditor - An individual trained, qualified, and certified to organize and direct an audit, report audit findings, and evaluate corrective actions. (NP 18-1)

Life Cycle – A model for software development that starts when a software product is conceived and ends when the software is retired. This model consists of and ensures documentation of technical adequacy. (NP 19-1)

Lifetime Records – Records required to be maintained for the useful life of the items to which they pertain while the items are installed in the plant or facility (life of the item), or for the lifetime of the equipment, facilities, or programs to which the records apply. (NP 17-1)

Lognormal Distribution – A probability distribution in which the logarithm of the variable in question follows a normal distribution. (NP 9-2)

Loguniform Distribution – A probability distribution in which the logarithm of the variable in question follows a uniform distribution. (NP 9-2)

Machine Readable Media – Records media such as computer discs or tape, videotape, optical discs, etc., that require the use of a device (computer system, videotape player/television) for the records content to be viewed by humans. (NP 17-1)

Machine Readable Records - Records that are recorded on machine-readable media. (NP 17-1)

Management Review - A review conducted by one or more management personnel. Management may include technical leads and team leaders. (NP 3-1, 5-1, 6-1, 9-1, 19-1, 20-1, SP 5-1)

Managing and Operating Contractor (MOC) - The Department of Energy (DOE) contractor responsible for managing and operating the WIPP site (at the time this document was released, Westinghouse TRU Solutions was the MOC Contractor). (NP 5-1)

Manual Inspection – Refers to manual activities which do not involve numerical manipulations. These include visual inspection of table reformatting or plotting, and concurrence with qualitative acceptance criteria such as trends in results due to input parameter variations. (NP 19-1)

May - Denotes an action that is completed at the discretion of the person implementing the procedure or instruction. (NP 5-1)

Mean – the expectation of a random variable: i.e., the sum (or integral) of the product of the variable and the PDF over the range of the variable. There is sample mean and mean: the mean, μ, of a distribution is one measure of the central tendency of a distribution, analogous to the arithmetic average of a series of numbers. The sample mean, $\bar{x}$, is the arithmetic average of values in an empirical data set. (NP 9-2)

Median – The value of a random variable at which its CDF takes the value 0.5; i.e., the 50th percentile point. (NP 9-2)

Measuring and Test Equipment (M&TE) - Equipment used to indicate, measure and acquire data, as well as equipment used as standards in verifying the performance of other M&TE. (NP 12-1)

MOC Manager of Industrial Safety - The individual or designate responsible for reviewing procedures from the standpoint of safety for all tasks to be performed at the WIPP site, regardless of the employee's organization. (NP 5-1)

Mode – The value of a random variable at which its PDF takes its maximum value. The mode of a set of data is the value in the set that occurs most often. (NP 9-2)

Non-Quality Assurance Record (NQ) – A record that meets the definition of a record, but does not meet the criteria of a quality assurance (QA) record. (NP 17-1)

Nonrecord Material – Materials generated by non WIPP activities or as identified as follows. Nonrecord material includes extra copies of records which are maintained in the Records Center or which have been imaged by the WIPP PRS, preliminary drafts of documents (when so marked), Sandia Corporate or contractor specific information, and professional organization or personal materials. (NP 17-1)

Normal distribution – a probability distribution in which the PDF is a symmetric, bell shaped curve of bounded amplitude extending from minus infinity to plus infinity. (Tierney, 1990) (NP 9-2)

Nuclear Audit - An audit of a QA program with requirements derived from 10 CFR 50, Appendix B, ASME NQA-1, or other similar nuclear QA standards. (NP 18-1)

On-line Document - The on-line version of a controlled document maintained in electronic format with the equivalent protection and controls required for documents subject to controlled distribution and access control measures to prevent unauthorized alterations or modifications of such document. (NP 6-2)

Oracle PR Worksheet – Sandia form, number SF6430-RDO, for use by procurement requesters to capture information regarding their intended procurement action (new purchase or procurement change) to be passed on to a Budget/Procurement Specialist for preparation and submittal of an Oracle electronic purchase requisition. This form is available on the SNL "Corporate Forms" website. (NP 4-1)

Parameters – All numbers or distributions of numbers used as initial input to a PA numerical model. A parameter is defined by its material name and property name. (NP 9-2)

Parameter Error – When incorrect data are used for a parameter in a PA calculation. (NP 9-2)

Parameter Record – A value or set of values associated with a parameter in the database. Each parameter record must be assigned to a particular analysis when it its values are entered in the WIPP PA Parameter Database. (NP 9-2)

Parameter Problem – When an incorrect parameter value or values are approved and entered into the parameter database but are remedied before the data are used in a calculation, or when another problem related to a parameter record occurs but can be corrected before the parameter(s) in question are accessed in a calculation. (NP 9-2)

Performance Assessment (PA) – A term used to denote all analysis activities carried out to (1) evaluate the long-term ability of a repository system to effectively isolate waste by complying with applicable regulatory performance objectives; and (2) to provide the basis for demonstrating regulatory compliance. (NP 9-2)

Permanent Record – Record which is maintained for the life of the Republic. (NP 17-1)

Primitive Baseline - Software and existing documentation placed under configuration control prior to approval for use. (NP 19-1)

Principal Investigator (PI) - The SNL NWMP staff member responsible for the completion of a particular investigation, design, or analysis. (NP 2-1, 3-1, 9-1, 16-1, 20-1, 20-2)

Probability Density Function – A real-valued function whose integral over any set gives the probability that a random variable has values in this set. (NP 9-2)

Product - An all-inclusive term commonly used to mean any of the following: structure, system, component, material, or equipment. This can also be a document, a report, or test results. (NP 4-1)

Production Baseline/Production Software - Baseline software that has been installed and checked out per NP 19-1, hence is approved for use. (NP 19-1)

Program Description – A document which describes the organizational structure and mission of the SNL WIPP project. It defines internal and external organizational interfaces to include management, performance, and assessment responsibilities. (NP 1-1)

Programmatic Decision (PD) – Programmatic, scoping, or sensitivity analyses associated with programmatic decisions. These analyses may be considered as scoping or screening in that they apply to development, implementation, and testing of improvements to the existing methodology. Scoping calculations include evaluative efforts regarding features, events, and processes (FEPs) screening, conceptual/mechanistic model evaluation, or assessment of grid adequacy. Sensitivity analyses can focus on testing the impact of alternative modifications for improving capabilities for conducting performance assessments (PAs) and for communicating and explaining the results of a PA. (NP 9-1, 9-2, 19-1)

Programmatic Decision Software – Software that is used to make programmatic decision such as scoping or screening analyses to develop, implement, or test potential improvements to existing methodology. This type of software does not fall under the life-cycle process. (NP 19-1)

Publicly Released Information – Unclassified information that does not have access restrictions and is eligible for world-wide audiences. (SP 6-1)

Purchase Order (PO) - A contract negotiated between a supplier and a Sandia Contract Representative (SCR) for commercial products or services. (NP 4-1)

Purchase Requisition (PR) – The SNL form used to request procurement action. It is also the form used to document a Change Requisition. (NP 4-1)

QA Program Training – Provided annually, this training is designed to ensure a common understanding of NWMP procedures necessary to meet or exceed established QA performance. (NP 2-1)

QA Record – An authenticated record that provides objective evidence of the quality of items or activities. (NP 1-1, 17-1)

QA Section - In the Statement of Work (SOW), the QA section prescribes the requirements of the QA Program, such as appropriate QA Procedures, and other applicable orders and documents to which the supplier must comply. The QA section may also require the supplier to develop their own QA Program or to follow SNL NWMP QA procedures. (NP 4-1)

Quality - The condition achieved when an item, service, or process meets or exceeds applicable requirements and user's expectations. (NP 1-1)

Quality Assurance (QA) - The governing program dictating planned and systematic actions taken during planning and completion of project tasks to provide the required degree of confidence in the final product. Quality control constitutes the actions taken to satisfy the QA requirements. (NP 1-1)

Quality Assurance (QA) Program - The program established to assign responsibilities and authorities, define policies and requirements, and provide for the performance and assessment of work. (NP 1-1)

Quality Assurance (QA) Review - A review to provide assurance that the document or activity being reviewed is consistent with SNL NWMP QA procedures, that appropriate quality assurance (QA) requirements have been met, and that specified quality requirements have been incorporated into the document or activity. (NP 3-1, 4-1, 5-1, 6-1, 9-1, 20-1, SP 5-1)

Quality Assurance Tracking System Coordinator (QATSC) - The SNL staff member responsible for the CAR tracking system. (NP 16-1)

Readily Available – Refers to documents that may be obtained from libraries or commercial establishments (does not mean immediately accessible). (NP 17-1, SP 6-1)

Readiness Review - An evaluation performed at the direction of management to ensure that prerequisites for critical work have been met, for example, implementing documents and management controls are available and approved, personnel have been suitably trained and qualified, and required equipment is available and ready for use. (NP 1-1)

Recalled Document – A Controlled Document and its unique document control number that has been removed from use. (NP 6-2)

Record Package – An informal term referring to a collection of records supporting one topic that is processed as a single record. (NP 17-1)

Record Source - Any individual performing SNL WIPP activities who generates or submits QA records (also non-QA) to the SNL WIPP Records Center. (NP 17-1)

Records – Books, papers, maps, photographs, machine readable materials or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations or other activities of the government or because of the informational value of the data in them. (All NPs and SPs)

Reference Review – The process of assuring that all cited references have been properly cited and are readily available. (SP 6-1)

Referenced Journals – The manuscript peer review and evaluation system that is utilized to protect, maintain, and raise the quality of the scholarly material published in journals. (SP 6-1)

Regression Testing - Software testing conducted during installation and checkout or after there has been a significant system software or hardware change to verify that the software produces the same results for a given set of inputs as previously documented. (NP 19-1)

Request for Quotation (RFQ) - A document issued to potential contractors by the Sandia Contract Representative (SCR) which requests a proposal on defined work or items. (NP 4-1)

Requester - With regard to procurement, the Sandia employee who requests products or services by initiating a procurement. With regard to parameters, the requester is an inclusive term used for anyone who generates a parameter distribution. (NP 4-1, NP 9-2)

Requirements Document (RD) - A software document that contains the requirements that the product must satisfy, including functionality, design constraints, attributes (including acceptance criteria), and external features. (NP 19-1)

Responsible Manager (RM) - The SNL manager or their designees that have direct responsibility for the affected activity(ies) and for assuring corrective action implementation. (NP 16-1, 19-1)

Retention - The period of time during which records must be maintained by an organization because they are needed for operational, legal, fiscal, historical or regulatory purposes. (NP 17-1)

Review and Approval – Process and form used to review and approve information releases before they are released outside of Sandia. This process ensures a systematic review of content, cataloging of released information, compilation for transmittal to DOE (if applicable), and subsequent documentation of approval. (SP 6-1)

Reviewer - An independent, qualified person who is competent to perform a review (e.g., technical, QA, ES&H). (NP 3-1, 4-1, 5-1, 6-1, 9-1, 19-1, 20-1, 20-2, SP 5-1)

Review Requester - The individual (Department Manager, Principal Investigator, Project Manager, or Author/Sandia Contact) who initiates the review process. (NP 6-1, SP 6-1)

Revision - A version of a document that is used to implement changes to that document. (NP 3-1, 5-1, 6-1, 9-1, 20-1, SP 5-1)

Root Cause (RC) - A problem that causes an undesirable event or condition. A valid root cause must meet the following three conditions:

1. Event or condition would not have occurred if the problem had not been present.
2. Event or condition probably will not recur due to the same cause if the problem is corrected.
3. Correcting or eliminating the problem probably will prevent similar conditions from occurring. (NP 16-1)

Root Cause Determination - The systematic process used to identify the most basic reason(s) for an adverse condition, which, if corrected, will preclude recurrence or greatly reduce the probability of recurrence, or similar adverse condition. (NP 16-1)

Routine Calculations – Simple data manipulations (e.g., unit conversions, interpolations, translations, rotations, or simple analytic solutions). (NP 9-1)

Sample - A physical representative part of a whole or population whose properties are studied to gain information that can be inferred to provide information about the whole or population. Samples include:
- Created samples - materials that are fabricated such as engineered materials (e.g., concrete), simulated brines, mixtures of chemicals and so on;
- Man-made samples - materials such as engineered materials (e.g., concrete); and
- Natural samples - materials collected from the natural environment such as rocks, minerals, soil, fluids, and gases. (NP 13-1, SP 13-1)

Sample Collector – The Principal Investigator (PI) or his designee who creates, collects, and/or submits samples under a sample management system. (NP 13-1)

Sample Description - This refers to the type of material being transferred using the CoC form. Type of material could include the sample matrix (e.g., soil, water, certified reference material) or the types

of sample (grab, composite, liquid, or brine), a box of files, notebooks, computer disks, or QA records. (SP 13-1)

Sample Possession/Custody – Material that is in the physical control of an individual or testing laboratory. (NP 13-1, SP 13-1)

Sample Transfer – The act of physically releasing and taking possession of sample material from one individual or testing laboratory to another person or testing laboratory. (NP 13-1, SP 13-1)

SAND Document - An official SNL technical publication authorized for outside distribution. It may be a full technical report, abstract, conference paper, journal article, or presentation materials. (NP 6-1, SP 6-1)

Sandia Contact – For a contractor publishing a SAND document, the Sandia staff member knowledgeable about the technical content of the report. (SP 6-1)

Sandia Contracting Representative (Buyer) – Specific SNL Purchasing Department staff who has the authority to obligate SNL to contracts for items/services; often referred to as the "buyer". (NP 4-1, 16-1)

Sandia Delegated Representative (SDR) - A Sandia employee authorized by the Sandia Contracting Representative (SCR) to administer certain aspects of a contract and who serves as the technical contact for the procurement. Often, but not necessarily, the same person as the Requester. (NP 4-1, 18-1)

Scientific Notebook (SN) - A record of the methodology and results of a scientific investigation when the work involves a high degree of professional judgment, sample collection, a trial-and-error method, or a descriptive activity. (NP 13-1, 20-1, 20-2, SP 13-1)

SCM Coordinator - Person responsible for overseeing the operation of the SCM system. (NP 19-1)

Scoping Analyses - Analyses associated with programmatic decisions and applied to the development, implementation or testing of improvements to the existing methodology. Scoping calculations include evaluative efforts regarding features, events, and process (FEPS) screening, conceptual/mechanistic model evaluation, and assessment of grid adequacy. (NP 9-1)

Sensitivity Analyses – Analyses associated with programmatic decisions and focused on testing the impact of alternative modifications for improving capabilities for conducting performance assessments (Pas) and for communicating and explaining the results of a PA. (NP 9-1)

Services – An all-inclusive term for performance of activities that include, but are not limited to, site characterization and assessment, site data acquisition, design, fabrication, investigation, analysis, support activities, repair, or installation of equipment. (NP 4-1)

Shall - Denotes an action required by a NWMP Department commitment, QA program requirement, or related requirements document. (NP 5-1, 19-1)

Should - Denotes a guideline action that is a suggested practice. These actions include good practices that are desirable for achieving uniformity or consistency of administration, but are not mandatory for ensuring quality. "Should" is implied when no auxiliary verb (shall or may) is used. (NP 5-1, 19-1)

Significant Condition Adverse to Quality (SCAQ) - A condition adverse to quality, if uncorrected, could have serious effect on safety, operability, waste isolation, regulatory compliance demonstration, consistent lack of attention to corrective action, or effective implementation of the NWMP Quality Assurance Program. (NP 16-1)

Single-Use Software – A software qualification in which the software is qualified for one use (e.g. test plan, analysis plan). (NP 19-1)

SNL WIPP Records Center – The SNL WIPP facility located in Carlsbad, New Mexico, which receives and manages all SNL WIPP generated or received records. The facility provides acceptance, processing, dual storage protection, and retention or disposition of records. (NP 17-1, SP 17-1)

Software Baseline – An item or product that has been formally reviewed and agreed upon, that serves as the basis for further development, and that can be changed only through formal change control procedures. (NP 19-1)

Software Configuration Management (SCM) - A system that tracks the software by unique identification, enables the retrieval of the software, tracks changes to the software and its associated documentation, and defines the code retirement process. (NP 19-1)

Software Validation - The test and evaluation process of determining whether the requirements for a software system or component are complete and correct, the products of each development phase fulfill the requirements or conditions imposed by the previous phases, and the final system or component complies with specified requirements. (NP 19-1)

Software Verification – The process of determining whether or not the product of a given phase of the software development cycle fulfills the requirements imposed by the previous phase. (NP 19-1)

Special Processed Records - Records that require unique handling because they cannot be duplicated or microfilmed due to their physical form (one-of-a-kind records) or cannot be filmed on 16-mm roll film. (NP 17-1)

Standards – With regard to measuring devices, those devices used to calibrate M&TE or other measurement standards and provide traceability. Measurement standards may be items that are used to provide basic units of measure, such as standard resistors and gauge blocks, or may be materials, such as pH buffer solutions. (NP 12-1)

Statement of Work (SOW) - The portion of a Request for Quotation or contract that states the requirements or tasks to be performed by the supplier to fulfill contractual obligations. (NP 1-1, 4-1)

Stop Work Order (SWO) - A directive to immediately stop an activity. (NP 16-1)

Student's-t distribution – A distribution for the unknown mean value of a parameter (CCA 1996.) The distribution of the random variable which is (very loosely) the "best" that we can do when the variance or true standard deviation is unknown and the sample size is small. (NP 9-2)

Suffixed Document – For a document released that is not a technical report, a letter designation is added to the SAND number to indicate the format, e.g., A for abstract. (SP 6-1)

Superseded Document - A Controlled Document that is no longer in effect because it has been revised and reissued under the same document number with a new revision number. (NP 6-2)

Supplier (Contractor) – An organization or individual that has agreed, by contract or purchase order, to provide products or services to SNL or designated recipient. (NP 4-1)

Support Staff – Personnel assigned to activities such as secretarial or records management support, requiring a minimum of a high school diploma. Also included are temporary personnel, such as students, assigned to work for the purpose of acquiring work experience. (NP 2-1)

Surveillance - The act of monitoring or observing real-time activities and/or reviewing documentation to verify whether an item, activity, system, or process conforms to specified requirements. (NP 18-1)

Surveillance Team Leader (STL) - A surveillance team leader is an individual designated to lead the conduct of a surveillance and shall be a qualified auditor. (NP 18-1)

System Administrator - Individual responsible for modifying the system software or hardware of a computer which is used to execute production software. (NP 19-1)

System Software - Software which is used exclusively in the preparation, installation, or operation of executable software applications. Examples of such software include operating systems, administrative and management systems, system utilities, compilers, assemblers, translators, interpreters, automated protocols, utilities and tools, teleprocessing managers, and query languages. (NP 19-1)

Technical Information Documents – Documents containing information derived from basic or applied research, development, engineering, technological demonstration, economic and social research, or scientific inquiry into phenomena or technology applications. (NP 6-1)

Technical Report Coordinator – The individual within the Technical Information Services group responsible for categorizing documents, obtaining SAND numbers, assuring that all Sandia and CBFO reviews and approvals have been properly performed and documented, final report is produced and appropriate QA records submitted. (NP 6-1, SP 6-1)

Technical Review - A documented, critical evaluation of documents, activities, materials, or data conducted to determine the applicability, correctness, adequacy, and completeness of the information submitted for review. Technical reviews must be performed by one or more qualified personnel who are independent of the work being reviewed and who, collectively, have technical expertise equivalent to those who performed the original work. (NP 3-1, 4-1, 5-1, 6-1, 9-1, 19-1, 20-1, 20-2, SP 5-1)

Technical Specialist - An individual who is assigned to an audit or surveillance team when the scope, complexity, or special nature of the work to be audited warrants assistance from a technical standpoint. (NP 18-1)

Technical Staff – Personnel assigned responsibility as Technical Staff require a minimum of either: (1) a Master's degree; (2) a Bachelor's degree and at least one year of relevant experience; (3) an Associate's degree and at least three years of relevant experience; or (4) with the approval of the Project Manager, an equivalent level of relevant experience. (NP 2-1)

Test Plan (TP) - A document that defines the technical scope and the technical requirements of an individual test, experiment, study or major design activity. (NP 1-1, 20-1)

Traceability – With regard to measuring and test equipment, the ability to relate individual measurement results through an unbroken chain of calibrations to one or more of the following: 1) US national standards maintained by NIST; 2) national standards of other countries which are correlated with US national standards; 3) accepted values of fundamental physical constants; 4) values derived

by the ratio type of self-calibration techniques; 5) intrinsic standards based on fundamental constants of nature with values assigned or accepted by NIST; and 6) comparison with consensus standards. For records, the ability to trace the history, application, and location of an item, data, or sample using recorded documentation. (NP 12-1, 17-1)

Traceability Review – Documentation produced during the Reference Review process showing that each reference is properly cited and readily available. (SP 6-1)

Transitioned Software – Software acquired or developed which was not created following life cycle methodology. This type of software may have missing life cycle components and needs to be evaluated and qualified prior to use. (NP 19-1)

Trend Analysis - The analysis of data to determine repetitive conditions, whether positive or negative, that may constitute a trend. (NP 16-1)

Triangular Distribution - A distribution useful for random variables constrained to lie between two fixed limits. This distribution peaks at some value between two limits and is characterized by three parameters: Lower Limit, Central Value (Mode), and Upper Limit. The triangular distribution is defined on the range (a, c) and has mode b. The mode can equal either of the two boundary values. (Iman and Shortencarier 1984) (NP 9-2)

Uniform distribution – A probability distribution in which the PDF is constant over the range of variable values. (NP 9-2)

Unique Records – Records that require unique handling because they cannot be duplicated or microfilmed due to their physical form (one-of-a-kind records) or cannot be scanned. (NP 17-1)

Unpublished Cited Documents – Documents cited in technical reports that are internal documents not available to the public unless submitted to the Records Center. (SP 6-1)

User - With regard to M&TE, the organization which either owns or is the primary user of the M&TE. This can also include individuals temporarily using equipment maintained by other organizations. The intent is that ultimate responsibility for ensuring that equipment is calibrated and maintained proper rests with the individual using the M&TE. With regard to software, a person who uses baseline software. (NP 12-1, 19-1)

User's Manual - A document intended for use by a user of the software containing, as applicable, the software name and version identifier, the platform(s), a statement of functional limitations, instructions that describe the user's interaction with the software, the identification and description of input and output specifications and formats, the valid ranges of input data, descriptions of user messages initiated as a result of improper input and how the user can respond, a description of any required training necessary to use the software, and an explanation of the mathematical model(s). (NP 19-1)

Validation Document (VD) - A software document that contains the results of the performance verification and validation tests defined in the Verification and Validation Plan (VVP) and evaluation of the outputs of those tests to demonstrate that the software produces valid results for problems encompassing the range of permitted usage as defined by the User's Manual. (NP 19-1)

Variance – The square of the standard deviation of the probability distribution; the standard deviation is a measure of the amount of spread of a distribution about its mean. The variance is a measure of the spread in the data. It is computed as the average squared deviation of each number from its mean. (NP 9-2)

Verification and Validation Plan (VVP) - A software document that delineates the test processes and associated acceptance criteria to be performed at the end of each software development phase. (NP 19-1)

2.0   Acronyms

The following is a compilation of the acronyms used in the NPs and SPs.

ADC – Authorized Derivative Classifier

ANSI - American National Standards Institute

AP - Analysis Plan

ASTM - American Society for Testing and Materials

ATL - Audit Team Leader

BPS – Budget/Procurement Specialist

CBFO - Carlsbad Field Office

CAP – Corrective Action Plan

CAQ – Condition Adverse to Quality

CAR - Corrective Action Request

CAV – Corrective Action Verification

CD - Controlled Document

CMS - Configuration Management System

CoC - Chain-of-Custody

CPU - Central Processing Unit

DAS - Data Acquisition System

DBA – Database Administrator

DD - Design Document

DOE - Department of Energy

DRC - Document Review and Comment Form

ES&H - Environmental Safety and Health

ISRM - International Society for Rock Mechanics

JIT - Just-in-Time

M&TE - Measurement and Test Equipment

MOC - Managing and Operating Contractor

NCSL - National Conference of Standard Laboratories

NEPA - National Environmental Policy Act (of 1969)

NP – Nuclear Waste Management Program Procedure

NQ – Non-quality Assurance

NQA – An ANSI Standard designator

NWM - Nuclear Waste Management

NWMP - Nuclear Waste Management Program

PA - Performance Assessment

PI - Principal Investigator

PM - Project Manager

PR - Purchase Requisition

QA - Quality Assurance

QAPD - Quality Assurance Program Document

QATSC - Quality Assurance Tracking System Coordinator

R&A – Review and Approval Form (Sandia) SF 1008-RA

RC - Root Cause

RD - Requirements Document

RFQ - Request for Quotation

RM - Responsible Manager

ROM - Read Only Memory

RS - Record Source

SCAQ – Significant Condition Adverse to Quality

SCM - Software Configuration Management

SCR - Sandia Contracting Representative

SDR - Sandia Delegated Representative

SN - Scientific Notebook

SNL - Sandia National Laboratories

SOW - Statement of Work

SP – Activity/Project Specific Procedure

SPR - Software Problem Report

SQA - Software Quality Assurance

STL - Surveillance Team Leader

SW - Software

SWO - Stop Work Order

TP - Test Plan

TR - Technical Reviewer

TRC - Technical Reports Coordinator

UM – User's Manual

VD – Validation Document

VVP - Verification & Validation Plan

WBS - Work Breakdown Structure

WIPP – Waste Isolation Pilot Plant